

FRESHMAN				SOPHOMORE				JUNIOR			SENIOR		
Fall <i>Chemistry I</i> CHEM 127 (4) * [B3 & B4]	Winter <i>Chemistry II</i> CHEM 128 (4) (CHEM 127)	Spring <i>Chemistry I</i> CHEM 129 (4) (CHEM 128)	Fall <i>Organic Chemistry I</i> CHEM 316 (5) (CHEM 316)	Fall <i>Organic Chemistry II</i> CHEM 317 (5) (CHEM 317)	Winter <i>Organic Chemistry III</i> CHEM 318 (3) (CHEM 317)	Spring <i>Biochemical Principles</i> CHEM 371 (5) (CHEM 317, BIO 161)	Fall <i>Physical Chemistry Lab</i> CHEM 354 (2) (CHEM 331: Prior or Corequisite: Chem 352)	Winter <i>Physical Chemistry III Laboratory</i> CHEM 357 (1) (CHEM 353)	Summer <i>Internship in Polymers and Coatings</i> CHEM 449 (2)³ (CHEM 444)	Fall <i>Inorganic Chemistry</i> CHEM 481 (3) (CHEM 352 and CHEM 331)	Winter <i>Instrumental Analysis</i> CHEM 439 (5) (CHEM 331, CHEM 354)	Spring <i>Senior Project Report</i> CHEM 461 (1) (Consent of Instructor)	
Fall <i>Calculus I</i> MATH 141 (4) * [B1]	Winter <i>Calculus II</i> MATH 142 (4) (MATH 141 w/ \geq C-) [B1]	Spring <i>Calculus III</i> MATH 143 (4) (MATH 142 w/ \geq C-)	Fall <i>General Physics Ia</i> PHYS 141 (4) (MATH 141 and MATH 142)	Fall <i>General Physics II</i> PHYS 132 (4) (PHYS 141)	Winter <i>General Physics III</i> PHYS 133 (4) (PHYS 141 and MATH 142)	Fall <i>Physical Chemistry I</i> CHEM 351 (3) (CHEM 129, PHYS 132, MATH 143)	Winter <i>Physical Chemistry II</i> CHEM 352 (3) (CHEM 351)	Spring <i>Physical Chemistry III</i> CHEM 353 (3) (CHEM 352)	Summer <i>Physics Elective</i> PHYS >200 (3) *	Fall <i>Undergraduate Seminar</i> CHEM 459 (2) (CHEM 318 and Junior Standing)	Winter <i>Inorganic Chemistry Laboratory</i> CHEM 484 (2) (CHEM 481)	Spring <i>Inorganic Chemistry Laboratory</i> CHEM 484 (2) (CHEM 481)	
Fall <i>Free Elective (2)¹</i>	Winter <i>GE (4) *</i>	Spring <i>Intro to Cell and Molecular Biology</i> BIO 161 (4) (CHEM 127) [B2]	Fall <i>Calculus IV</i> MATH 241 (4) (MATH 143) [B1]	Fall <i>Linear Analysis I</i> MATH 244 or 200 - 400 level CSC/STAT course(4) (MATH 143) *	Winter <i>Advanced Organic Chemistry Lab</i> CHEM 319 (2) (CHEM 318)	Fall <i>Polymers and Coatings I</i> CHEM 444 (3) (CHEM 316)	Winter <i>Polymers and Coatings II</i> CHEM 445 (3) (CHEM 317 and CHEM 444)	Spring <i>Surface Chemistry of Materials</i> CHEM 446 (3) (CHEM 351)	Summer <i>GE (4) *</i>	Fall <i>GE (4) *</i>	Winter <i>GE (4) *</i>	Spring <i>GE (4) *</i>	
Fall <i>Expository Writing</i> ENGL 133/134 (4)* [A1] Can be taken anytime during Freshman Year	Winter <i>Oral Communication</i> COMS 101/102 (4)* [A2] Can be taken anytime during Freshman Year	Spring <i>Reasoning, Argumentation, & Writing</i> [A3] COMS 126; COMS/ENGL 145; ENGL148; PHIL 126 (4) (Completion of GE A1 with a C- or better) Can be taken anytime between Winter of Freshman and Winter of Sophomore Years.	Fall <i>Materials Engineering</i> MATE 210 (3) (CHEM 127)	Fall <i>Quantitative Analysis</i> CHEM 331 (5)² (CHEM 129)	Winter <i>Polymers and Coatings Laboratory I</i> CHEM 447 (2) (CHEM 444)	Fall <i>Polymers and Coatings Laboratory II</i> CHEM 448 (2) (CHEM 447: Corequisite Chem 445)	Winter <i>Graduation Writing Requirement</i> GWR* (Can be taken any time after 90 earned units)	Spring <i>GE (4) *</i>	Summer <i>GE (4) *</i>	Fall <i>GE (4) *</i>	Winter <i>GE (4) *</i>	Spring <i>Free Elective Elective -2</i>	
14	17	17	16	17	14	13	14	15	2	14	15	12	TOTAL: 180

Notes:

MOST GENERAL EDUCATION COURSES CAN BE TAKEN IN ANY ORDER AS LONG AS PREREQUISITES ARE MET

* Refer to current catalog for prerequisites.

*One course from each of the following GE areas must be completed: A1, A2, A3, C1, C2, C3, C4, C1-C4 elective, D1, D2, D3, D4, D5 and F.

C4, D5 and F should be taken only after Junior standing is reached (90 units).

Refer to online catalog for GE course selection, United States Cultural Pluralism (USCP) and Graduation Writing Requirement (GWR).

USCP requirement can be satisfied by some (but not all) courses within GE categories: C3, C4, D1, D3, D4, D5 or F.

¹ A total of 5 units of elective credit are required for this major/concentration combination. The Chemistry Department strongly recommends that you take "Introduction to the Chemical Sciences" [CHEM 101] offered only in Fall Quarter and Supplemental Workshops [SCM 150] for Math and Science for elective credit in your first year.

² Students should take CHEM 331 during their second year, and as soon as possible after completing CHEM 129.

³ Internship in Polymers and Coatings: Selected students will spend up to 12 weeks with an approved P&C firm engaged in production or related business. Prerequisite: CHEM 444 or consent.

Legend:

Course Title	
Course # (Units)	
(Pre-Requisite)	
[GE Area]	
	

